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(54) Title: **NOVEL BACILLUS mHKcel CELLULASE**

**ORF Nucleotide sequence of mHKcel cellulase gene**

ATGGGTTATA CCCAAGCTAA GTGTATGGTG AAAAAACGG TCTTGTTTGG 50  
TTTAATTCTC TGTITAGGTG TGTCAATGTT TGTACCAGTT ACATCAGCTG 100  
AAGATAGGGT CTCTTCGTCA CAGGTGGATA TCCAATCATTA TGTCAGAGAT 150  
ATGCAACCTG GCTGGAATTT AGGTAATACA TTGTATGCGA TAGGAGATGA 200  
TGAAACAGCA TGGGGAACCT CTCGTGTAAC GAGAGAATTA ATAGAAATGA 250  
TTGCTGATGA AGGGTATAAA AGTATTCGTA TCCAGTCAC ATGGCAAAAT 300  
CAAATGGGTG GTTCTCCAGA TTATACAAAT AATGAAGATT ATATCAAGCG 350  
GGTAGAGCAA GTGATAGATT GGGCGTTTGA GGAAGACTTG TATGTGATGT 400  
TAAATGTGCA TCATGACTCA TGGCTGTGGA TGTATGATAT GGAACATAAC 450  
TATGATGAGG TGATGGCAAG ATATACAGCT ATTTGGGAAC AATTGTGCGA 500  
AAAATTCAAA AACCACCTCC ATAAGTTGAT GTTTGAGAGT GTCAATGAGC 550  
CTAGGTTTAC GCAGGAGTGG GGAGAGATTC AAGAAAATCA TCATGCTTAC 600  
TTAGAAGATT TAAATAAGAC GTTCTATTAT ATTGTCAGAG AGTCAGGAGG 650  
CAATAATGTG GAGCGCCCTT TAGTATTGCC TACGATAGAA ACAGCCACGT 700  
CTCAGGATTT ACTAGATCGC TTGTATCAAA CAATGGAAGA CTGCGATGAC 750  
CCTCATTTAA TTGCCACGGT TCATTATTAT GGCTTTTGGC CCTTTAGTGT 800  
CAATATAGCA GGGTACACCC GTTTTGAACA GGAGACACAA CAAGATATTA 850  
TAGACACGTT TGACCGTGT CATAACACAT TTACAGCGAA TGGGATCCCA 900  
GTTGTATTAG GTGAATTTGG TTTGTTAGGC TTTGATATAA GTACGGACGT 950  
CATTCAGCAA GGTGAGAAAT TAAATTTTTC TGAGTTTCTC ATCCATCATC 1000  
TCAATGAACG TGATATAACC CATATGTTAT GGGATAACGG TCAGCATTTA 1050  
AAGCGAGAAA CTTATTTCATG GTATGATCAG GAATTTTCATG ACATATTAAA 1100  
AGCGAGTTGG GAGGGGCGTT CTGCTACAGC TGAGTCTAAT TTCATTCATG 1150  
TGAAGGACGG AGAGCCAATT AGAGATCAAC ATATACAGCT TTAATTAAAC 1200  
GGAATGAGC TAACTGCCCT ACAGGCAGGG GACGAATCGC TTGTACTAGG 1250  
AGAGGATTAT GAGCTAGCAG GAGACGTATT AACGCTAATA GCGGGCATCC 1300  
TCACAAGATT AATTACCCCT GGCCAATTAG GAACGAATGC GGTCATCACA 1350  
GCTCAATTTA ATTCTGGAGC AGACTGGCGT TTTCAATTAC AGAATGTGGA 1400  
CGTGCCAAAC GTCCGAAATA CAGATGGCTC AATATGGCAT TTTGCGATCC 1450  
CTACCCATTT TAATGGTGAT AGTCTTGCGA CGATGGAAGC TGTTTATGCA 1500  
AACGGAGAAAT ATGCTGGCCC GCAAGATTGG ACGTCATTTA AAGAATTTGG 1550  
CGAGGCGTTT TCCCCTAATT ACGCCACAGG GGAATTTATT ATAACAGAAG 1600  
CCTTCTTTAA CGCGGTACGG GATGATGATA TCCATTTAAC ATTTTATTAT 1650  
TGGAGCGGAG AGACGGTGGG ATATACATTA CGTAAAAATG GAAATTATGT 1700  
TCAAGGTAGA CGGTAA 1715

(57) Abstract: The present invention provides a novel cellulase nucleic acid sequence, designated mHKcel, and the corresponding mHKcel amino acid sequence. The invention also provides expression vectors and host cells comprising a nucleic acid sequence encoding mHKcel, recombinant mHKcel proteins and methods for producing the same.

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